

WE CLAIM:

1. A sewing machine comprising:
a threader including a threading hook for passing a thread
5 through an eye of a needle; and
a thread drawer including a thread drawing member wiping
the thread extending through the needle eye downward, the thread
drawing member also drawing a looped thread having been passed
through the needle eye by the threading hook.
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2. A sewing machine according to claim 1, wherein when the
looped thread is drawn by the thread drawing member, the thread
drawer draws the thread to a position where the thread is released
from a looped state.
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3. A sewing machine according to claim 1, wherein a part
of the thread between the needle and the threading hook is drawn
by the thread drawing member while the threading hook in engagement
with the thread is spaced away from the needle rearward.
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4. A sewing machine according to claim 1, further comprising
a thread holding member holding an end of the thread caught on
the threading hook before the thread is passed through the needle
eye, wherein the thread drawing member is engaged with the thread
25 after the thread has been released from a held state by means
of the thread holding member, thereby drawing the thread.
5. A sewing machine according to claim 1, wherein the thread

drawing member draws a free end side of the looped thread formed by the threading hook.

6. A sewing machine according to claim 2, wherein the thread
5 drawing member has a shorter distance of movement in a case of releasing the thread from the looped state than a distance of movement in a case of wiping the thread.

7. A sewing machine according to claim 2, wherein the thread
10 drawing member has a distal end positioned higher in a case of releasing the thread from the looped state than in a case of wiping the thread.

8. A sewing machine according to claim 2, wherein the thread
15 drawing member releases the thread from the looped state in a middle of a movement locus thereof in a case of wiping the thread.

9. A sewing machine according to claim 1, wherein the sewing
machine is a multi-needle sewing machine including a plurality
20 of needle bars provided with needles respectively.

10. A sewing machine according to claim 1, wherein the thread
drawing member carries out a thread drawing operation while a
distal end of the threading hook on which the thread is caught
25 is located lower than the needle eye.

11. A method of controlling a threader and a thread drawer
of a sewing machine, the threader including a threading hook for

passing a thread through an eye of a needle, the thread drawer including a thread drawing member wiping the thread extending through the needle eye downward, the method comprising drawing, by the thread drawing member, a looped thread having been passed
5 through the needle eye by the threading hook.

12. The method according to claim 11, wherein when the looped thread is drawn by the thread drawing member, the thread drawer draws the thread to a position where the thread is released from
10 a looped state.

13. The method according to claim 11, wherein a part of the thread between the needle and the threading hook is drawn by the thread drawing member while the threading hook in engagement with
15 the thread is spaced away from the needle rearward.

14. The method according to claim 11, further comprising holding, by a thread holding member, an end of the thread caught on the threading hook before the thread is passed through the
20 needle eye, wherein the thread drawing member is engaged with the thread after the thread has been released from a held state by means of the thread holding member, thereby drawing the thread.

15. The method according to claim 11, wherein the thread
25 drawing member draws a free end side of the looped thread formed by the threading hook.

16. The method according to claim 12, wherein the thread

drawing member has a shorter distance of movement in a case of releasing the thread from the looped state than a distance of movement in a case of wiping the thread.

5 17. The method according to claim 12, wherein the thread drawing member has a distal end positioned higher in a case of releasing the thread from the looped state than in a case of wiping the thread.

10 18. In a sewing machine including a threader including a threading hook for passing a thread through an eye of a needle, a thread drawer including a thread drawing member wiping the thread extending through the needle eye downward, the thread drawing member also drawing a looped thread having been passed through
15 the needle eye by the threading hook, a control unit controlling the threader and the thread drawer, a first operation section for entering a command to operate the threader and a second operation section for entering a command to cause the thread drawer to release the thread from a looped state, a threading control
20 program executed by a computer of the control unit so that the needle eye is threaded and comprising:

 a first routine of passing the threading hook through the needle eye in response to the command delivered from the first operation section;

25 a second routine of pulling, through the needle eye, the threading hook on which the thread is caught, causing the threader to carry out a threading operation, and moving the threader by a predetermined distance so that the threader is stopped at a

thread releasing position;

a third routine of operating the thread drawer so that the thread drawing member of the thread drawer engages the looped thread extending from the needle eye by the threading hook; and

5 a fourth routine of returning the thread drawing member of the thread drawer to a standby position and further returning the threading hook of the threading hook to a standby position.

19. In a sewing machine including a threader including a
10 threading hook for passing a thread through an eye of a needle, a thread drawer including a thread drawing member wiping the thread extending through the needle eye downward, the thread drawing member also drawing a looped thread having been passed through the needle eye by the threading hook, a control unit controlling
15 the threader and the thread drawer, and a first operation section for entering a command to operate the threader, a threading control program executed by a computer of the control unit so that the needle eye is threaded and comprising:

a first routine of passing the threading hook through the
20 needle eye in response to the command delivered from the first operation section;

a second routine of pulling the threading hook through the needle eye, the threading hook having been passed through the needle eye as the result of execution of the first command from
25 the first operation section and causing the threader to carry out a threading operation and moving the threader by a predetermined distance so that the threader is stopped at a thread releasing position;

a third routine of operating the thread drawer so that the thread drawing member of the thread drawer engages the looped thread extending from the needle eye by the threading hook; and

a fourth routine of returning the thread drawing member of the thread drawer to a standby position and further returning the threading hook of the threading hook to a standby position.

20. A threading control recording medium on which the threading control program defined by claim 18 is recorded so as to be readable.

21. A threading control recording medium on which the threading control program defined by claim 19 is recorded so as to be readable.